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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,588	07/15/2005	Stuart Charles Wray	038665.56184US	4791

23911 7590 05/07/2010

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EXAMINER	
THOMPSON, JR, OTIS L	

ART UNIT	PAPER NUMBER
2477	

MAIL DATE	DELIVERY MODE
05/07/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/532,588	WRAY ET AL.	
	Examiner	Art Unit	
	OTIS L. THOMPSON, JR	2477	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 February 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,6-8 and 24-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6-8 and 24-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Arguments

1. Applicant's arguments filed February 1, 2010 with respect to claim 1 have been fully considered but they are not persuasive. Applicant argues that while Wetzel (US 6,388,990 B1) a method and system for provisioning remote user data access over DSLs through connection-oriented packet networks, the training being performed in Wetzel is done only once and at the initial set up of the system. Applicant further agues that the training rate is only transmitted by the multiplexer at the service provider, and there is no disclosure or suggestion that the subscriber uses the training rate when establishing a connection to the service provider.

While Applicant's statements concerning Wetzel may be true, Applicant's arguments are not commensurate with the scope of the claimed invention. Claim 1 and its dependent claims do not specifically require that more than one training operation (i.e. *Transmission of the burst of trial data and receipt of the reflected burst of trial data*) be performed. Furthermore, figure 6 and column 11 lines 35-55 disclose and suggest that the training operation (i.e. *bursts of trial data*) is routinely employed when establishing a connection between the subscriber and the service provider. Specifically, step at 622 the DSL link is re-established and the training operation is repeated. Hence, the training operation is routinely employed (i.e. performed more than once).

Claim 1 and its dependent claims also do not specifically require that the subscriber uses the training rate (i.e. *transmits burst of trial data at a higher data rate that the packets to be transmitted*). Claim 1 only requires communication between two local area networks without specifically reciting which devices within those networks are performing the communication. The claim does not specifically recite that a subscriber is using the training when transmitting the

burst. Hence, the fact that Wetzel performs training between an access multiplexer and a subscriber clearly reads upon the presently claimed invention.

2. Applicant's arguments filed February 1, 2010 with respect to claim 24 have been fully considered but they are not persuasive. Applicant argues that Patel (US 6,697,378 B1) does not disclose or suggest that a change in priority occurs when the packet loss rate is not acceptable. Applicant argues that Patel's disclosure of dynamically changing a priority class based on TCP packet losses or call failures is not the same as changing priority when the packet loss rate is not acceptable. Examiner respectfully disagrees. Column 7 lines 44-48 and column 6 lines 47-55 clearly disclose and suggest a change in priority occurring when a packet loss rate is not acceptable by stating that variable parameters (i.e. such as priority class from Column 7 lines 44-48) are **dynamically changed** based on real-time information regarding call failure and/or packet losses (Column 6 lines 47-55). It is more than clear that a certain amount of packet loss causes a change in priority.

Accordingly the current rejection is maintained over the prior art, and this action is made final.

DETAILED ACTION

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. 1-3, 6-8, 32, 33, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Odom et al. (Cisco VoIP Call Admission Control) in view of Wetzel (US 6,388,990 B1).

5. **Regarding claim 1**, Odom et al. discloses *a method of call admission control for a continuous stream of data in packet switched networks including at least two local area networks communication to one another across a connecting network, the method comprising the steps of*:

a. *Transmitting a burst of trial data from a first node in the first local area network through the connecting network to a second node in the second local area network* (Odom, Page 19, SAA Protocol; The SAA protocol sends a probe [i.e. burst of trial data; Page 23, SAA Probe Format, see "…each probe consists of multiple packets…"] from the SAA client on the gateway device in the first LAN [Odom, Figure 4] to the server gateway in the other network [Odom, Page 19, SAA Protocol].);

b. *Reflecting the burst of trial data received at the second node back to the first node* (Odom, Page 19, SAA Protocol, see "…returns probe to the sender…");

c. *Receiving the reflected burst of trial data at the first node through the connecting network* (Odom, Page 19, SAA Protocol, see "…returns the probe to the sender…", i.e. receiving the reflected burst is inherent);

d. *Comparing the reflected burst of trial data to the transmitted burst of trial data to determine whether transmission of a continuous stream of data can be initiated from the first node in the first local area network to the second node in the second local area network* (Odom, Page 19, SAA Protocol, Calculating Planned Impairment Value; It is noted that in order to determine packet loss in a ping style test [Odom, Page 18, SAA

Probes Versus Pings], the reflected burst of trial data must be analyzed and compared to the data sent to determine if a portion of the burst was lost [i.e. if packet loss occurred]).

Odom et al. discloses the claimed invention above but fails to specifically disclose that *the burst of trial data is transmitted at a higher data rate than the packets to be transmitted on initiation of the continuous stream of data.* However, Wetzel discloses a system in which a digital subscriber line trains at a data speed which is higher than the subscribed data rate of the digital subscriber line (See Claim 1). In other words, the digital subscriber line tests the line at data rate higher than the subscribed data rate (i.e. *trial data is transmitted at a higher data rate than the packets to be transmitted on initiation of the continuous stream of data*). Wetzel's method avoids network congestion caused by data rate mismatches between the DSL connection and a corresponding PVC through the connection-oriented packet network (Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to incorporate the teachings of Wetzel into Odom et al. in order to avoid network congestion in a packet network.

6. **Regarding claim 2,** Odom et al. in view of Wetzel. inherently discloses *selecting a path through the connecting network, the path being determined by the connecting network* because in Odom et al., according to the SAA Protocol on page 19, SAA probes used for CAC go out randomly on ports in the top end of the audio UDP-defined port range. The path is thus inherently determined by the connecting network and not predefined.

7. **Regarding claim 3,** Odom et al. in view of Wetzel discloses that *the burst of trial data is the same size as the packets to be transmitted in the continuous stream of data* (Odom et al., Page 18, SAA Probes Versus Pings, see "...SAA packets can be built and customized to mimic

the type of traffic for which they are measuring the network-in this case a voice packet..."; Page 19, SAA Protocol, see "…SAA probes...go out randomly...; they use a packet size based on the codec the call will use...").

8. **Regarding claim 6,** Odom et al. in view of Wetzel discloses *comparing the number of packets in the transmitted burst of trial data and the reflected burst of trial data, and calculating an estimate of packet loss rate* (Odom et al., Page 18, The Cisco Service Assurance Agent, see "…capabilities to measure network delay and packet loss are useful…reasonable to assume that the packet delay and loss values that the probe returns…"; Page 19, Calculated Planning Impairment Factor, see "...calculation based on network delay and packet loss figures...").

9. **Regarding claim 7,** Odom et al. in view of Wetzel discloses *transmitting multiple bursts of trial data to improve the estimate* (Odom et al., Page 23 under Figure 10, see "…periodic probe…will be sent to that destination to refresh the information...dynamically adjusts the probe traffic...").

10. **Regarding claim 8,** Odom et al. in view of Wetzel discloses *deciding to transmit packet data based on an acceptable packet loss rate for the transmission of the continuous stream of data* (Odom et al., Page 18, Measurement Based CAC Mechanisms, see "…SAA probes…measure the loss and delay…These values…to use in making a decision on the condition…ability to carry a voice call…"; Page 19, Calculated Planning Impairment Factor, see "…probe delay and loss information is used in calculating an ICPIF value that is then used as a threshold for CAC decisions...").

11. **Regarding claims 32 and 33,** Odom et al. in view of Wetzel discloses *wherein said first node comprises a telephone and wherein said second node comprises a telephone* (Odom et al.,

Page 1 1st paragraph, see "…(CAC) is a concept that applies to voice traffic only…", i.e. This implies that the first and second nodes are telephones; Also see figure 8).

12. **Regarding claim 37,** Odom et al. in view of Wetzel discloses *wherein the packet loss rate is not acceptable and the method includes not initiating the transmission of the continuous stream of data* (Odom et al., Page 18, Measurement Based CAC Mechanisms, see "…SAA probes…measure the loss and delay…These values…to use in making a decision on the condition…ability to carry a voice call…"; Page 19, Calculated Planning Impairment Factor, see "…probe delay and loss information is used in calculating an ICPIF value that is then used as a threshold for CAC decisions...").

13. Claims 24-27, 29-31, and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Odom et al. in view of Patel (US 6,697,378 B1).

14. **Regarding claim 24**, Odom et al. discloses *a method of call admission control for a continuous stream of data in packet switched networks including at least two local area networks communication to one another across a connecting network, the method comprising the steps of*:

e. *Transmitting a burst of trial data from a first node in the first local area network through the connecting network to a second node in the second local area network* (Odom, Page 19, SAA Protocol; The SAA protocol sends a probe [i.e. burst of trial data; Page 23, SAA Probe Format, see "…each probe consists of multiple packets…"] from the SAA client on the gateway device in the first LAN [Odom, Figure 4] to the server gateway in the other network [Odom, Page 19, SAA Protocol].);

f. *Reflecting the burst of trial data received at the second node back to the first node* (Odom, Page 19, SAA Protocol, see "…returns probe to the sender…");

g. *Receiving the reflected burst of trial data at the first node through the connecting network* (Odom, Page 19, SAA Protocol, see "…returns the probe to the sender…", i.e. receiving the reflected burst is inherent);

h. *Comparing the reflected burst of trial data to the transmitted burst of trial data to determine whether transmission of a continuous stream of data can be initiated from the first node in the first local area network to the second node in the second local area network* (Odom, Page 19, SAA Protocol, Calculating Planned Impairment Value; It is noted that in order to determine packet loss in a ping style test [Odom, Page 18, SAA Probes Versus Pings], the reflected burst of trial data must be analyzed and compared to the data sent to determine if a portion of the burst was lost [i.e. if packet loss occurred]).

Odom et al. does not specifically disclose *wherein the packet loss rate is not acceptable, the method further comprising the step of changing the priority of the transmission of continuous stream of data and repeating steps a) to d) above at the changed priority.*

However, Patel discloses a method of class-based transmission control of data connections. In the method, an IP data connection could be assigned a "high priority" class, but based on some real-time statistics such as TCP packet losses, or call failures, the priority class is changed (Column 7 lines 43-48). It is obvious that, in this disclosure, *the packet loss rate at the current high priority is not acceptable.* Therefore, in order to decrease that packet loss rate, or call failures, the priority of the current transmission is dynamically changed (i.e. *changing the priority of the transmission of the continuous stream of data*). As for the step of *repeating steps*

a) to d) at the changed priority, Odom et al. discloses the use of a periodic probe which refreshes information (Odom et al., Page 23 under Figure 10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to incorporate the teachings of Patel in to Odom et al. in order decrease the packet loss rate of a continuous stream of data to an acceptable rate for successful transmission.

15. **Regarding claim 25,** Odom et al. in view of Patel inherently discloses *wherein step a) includes selecting a path through the connecting network, the path being determined by the connecting network* because in Odom et al., according to the SAA Protocol on page 19, SAA probes used for CAC go out randomly on ports in the top end of the audio UDP-defined port range. The path is thus inherently determined by the connecting network and not predefined.

16. **Regarding claim 26,** Odom et al. in view of Patel discloses that *the burst of trial data is the same size as the packets to be transmitted in the continuous stream of data* (Odom et al., Page 18, SAA Probes Versus Pings, see "...SAA packets can be built and customized to mimic the type of traffic for which they are measuring the network-in this case a voice packet..."; Page 19, SAA Protocol, see "…SAA probes...go out randomly...; they use a packet size based on the codec the call will use...").

17. **Regarding claim 27,** Odom et al. in view of Patel discloses *wherein the burst of trial data is transmitted at the same data rate as the packets to be transmitted* (Odom et al., Page 18, SAA Probes Versus Pings, see "...SAA packets can be built and customized to mimic the type of traffic for which they are measuring the network-in this case a voice packet...", i.e. Mimic the traffic type includes transmitting the burst of trial data at the same data rate as the actual traffic).

18. **Regarding claim 29,** Odom et al. in view of Patel discloses *wherein step d) includes comparing the number of packets in the transmitted burst of trial data and the reflected burst of trial data, and calculating an estimate of packet loss rate* (Odom et al., Page 18, The Cisco Service Assurance Agent, see "…capabilities to measure network delay and packet loss are useful…reasonable to assume that the packet delay and loss values that the probe returns…"; Page 19, Calculated Planning Impairment Factor, see "...calculation based on network delay and packet loss figures...").

19. **Regarding claim 30,** Odom et al. in view of Patel discloses *transmitting multiple bursts of trial data to improve the estimate* (Odom et al., Page 23 under Figure 10, see "…periodic probe…will be sent to that destination to refresh the information...dynamically adjusts the probe traffic...").

20. **Regarding claim 31,** Odom et al. in view of Patel discloses *wherein the packet loss rate is not acceptable and the method includes not initiating the transmission of the continuous stream of data* (Odom et al., Page 18, Measurement Based CAC Mechanisms, see "…SAA probes…measure the loss and delay…These values…to use in making a decision on the condition…ability to carry a voice call…"; Page 19, Calculated Planning Impairment Factor, see "…probe delay and loss information is used in calculating an ICPIF value that is then used as a threshold for CAC decisions...").

21. **Regarding claim 36,** Odom et al. in view of Patel discloses *deciding to transmit packet data based on an acceptable packet loss rate for the transmission of the continuous stream of data* (Odom et al., Page 18, Measurement Based CAC Mechanisms, see "…SAA probes…measure the loss and delay…These values…to use in making a decision on the

condition…ability to carry a voice call…"; Page 19, Calculated Planning Impairment Factor, see "…probe delay and loss information is used in calculating an ICPIF value that is then used as a threshold for CAC decisions...").

22. **Regarding claims 34 and 35,** Odom et al. in view of Patel discloses *wherein said first node comprises a telephone and wherein said second node comprises a telephone* (Odom et al., Page 1 1st paragraph, see "…(CAC) is a concept that applies to voice traffic only…", i.e. This implies that the first and second nodes are telephones; Also see figure 8).

23. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Odom et al. in view of Patel as applied to claim 24 above, and further in view of Wetzel.

Regarding claim 28, Odom et al. in view of Patel discloses the claimed invention above but fails to specifically disclose *wherein the burst of trial data is transmitted at a higher data rate than the packets to be transmitted.* However, Wetzel discloses a system in which a digital subscriber line trains at a data speed which is higher than the subscribed data rate of the digital subscriber line (See Claim 1). In other words, the digital subscriber line tests the line at data rate higher than the subscribed data rate (i.e. *trial data is transmitted at a higher data rate than the packets to be transmitted*). Wetzel's method avoids network congestion caused by data rate mismatches between the DSL connection and a corresponding PVC through the connection-oriented packet network (Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to incorporate the teachings of Wetzel into the system of Odom et al. in view of Wetzel in order to avoid network congestion in a packet network.

Conclusion

24. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OTIS L. THOMPSON, JR whose telephone number is (571)270-1953. The examiner can normally be reached on Monday to Thursday 7:30 am to 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag Shah can be reached on (571)272-3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Otis L Thompson, Jr./
Examiner, Art Unit 2477

April 28, 2010

/Chirag G Shah/
Supervisory Patent Examiner, Art Unit 2477